

PALS – Play and Life Skills

Play as an Opportunity for Developing Life Skills

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Abstract

In free play settings, children from four to eight years of age acquire, in addition to concrete situational play competencies, a series of generic skills that can be summarized under the keyword of *life skills*. Three concepts are central to the theoretical framing of the concept of these life skills: the OECD Learning Framework 2030 (2018), the United Nations' perspective (2006), and the World Health Organization's understanding of life skills (1999). The skills as described by UNICEF, UNESCO and the WHO can be further broken down into concrete skills: problem solving, critical thinking, effective communication, decision making, creative thinking, interpersonal relationships, building self-awareness, empathy and coping with stress and emotions (United Nations, 2006, p. 1). The PALS project explores the life skills that children acquire in different play settings on various levels. Free play is understood as an act of intrinsic motivation of a voluntary nature with the actual play process itself and the positive emotions that are connected. The project incorporated the development of various elements for teacher training in co-creation with universities in Serbia, the Republic of North Macedonia, and Switzerland, producing manuals for students, lecturers and teachers, and creating a series of teaching videos and training modules for the University. An accompanying study investigated the underlying attitudes and learning processes at the level of participating students, lecturers and teachers (and, to a certain extent, pupils and parents) both quantitatively and qualitatively.

This article will provide an insight into this international collaborative project and its various constituent elements. Significant issues regarding the different understandings of play and its practice will be highlighted and discussed.

1. The Connection Between Play and Life Skills

The child is free to determine his own actions according to the laws and demands of the play he is involved in. Through and in his play, he is able to feel himself to be independent and autonomous. (Friedrich Froebel, 1782–1852, pioneering educator, who recognised the importance of play when he opened the first kindergarten for children under the age of 7 in 1836).

Childhood and play have changed over the past few decades as the result of various social phenomena. Changing family forms, digitalisation, changing play spaces, an increasing fear resulting from regional conflicts or climate change, and a different view of how children should grow up influence the play competencies of children (Damovska et al., 2023, p. 85; Grieper, 2012; Zimmer, 2014). Bearing in mind that play is the central mode of learning for young children, schooling and education must deal with the described phenomena and need to adapt to these challenges. Children in kindergarten and lower primary school settings learn through many different situations. The younger the children are, the more implicitly learning takes place, and the more unconsciously learning processes happen. Children constantly learn, no matter where they are – in family life when playing with other children, at school, and in childcare structures. Both family and school represent living and learning spaces for the child.

1.1 Play as the Central Mode of Learning for Children

Everyday situations and opportunities that are closely oriented to needs and interests provide a scenario to experience, discover, play and learn (Lieger, 2020). Play and the associated experience-oriented play projects with a strong participatory character prove to be age-appropriate and meaningful at the elementary level (Lieger, 2014). Play is the “profession” of every child (Krenz,

2004). The central mode of learning for children in the elementary sector is therefore incidental learning – children at this age experience play and learning as one. Especially in free play, which can be seen as an act of intrinsic motivation and voluntariness, as well as the play process and the positive emotions therein (Einsiedler, 1999), children are actively engaged and motivated to test and expand their abilities. In doing so, they learn through feeling and experiencing with all their senses. Play as a form of learning runs parallel to a child's development in this elementary school age group and is associated with positive emotions. With increasing age, incidental learning gradually progresses into conscious learning (Lieger, 2014).

In play situations, children do not just learn subject-specific content or acquire competencies related to particular processes: they need to solve maths problems, formulate sentences and gather knowledge about grammar or words or special concepts about nature and society. They also learn how to interact with others, solve problems alone or in a group, analyse situations critically, deal with their emotions and use their creativity in different situations. In short, they acquire the necessary skills that will serve as a foundation not only for subject-related questions, but also for various life situations in kindergarten and school as well as in their future careers: it is in play situations, therefore, that children acquire future life skills. The period in which children not only master most of their skills (movement activities, motor skills, creative thinking, social skills, emotions and how to express/master them, etc.), but also acquire basic knowledge, is the time up to the age of twelve. The easiest way to achieve these skills is for children to learn through play, because play is the most natural way of learning for them. It is also necessary to adapt the educational and teaching process to a child's development and to base it on experiential learning, i.e. to connect play and learning in a meaningful way.

1.2 Life Skills and Their Importance for Future Learning

In addition to subject-specific experiences (language, science, etc.), children acquire many generic competencies – life skills – during play. Discussions on these necessary generic competencies is currently being conducted not only in educational policy discourses in individual countries, but also at an international level. Against the backdrop of rapidly changing societies in ecolog-

ical, economic and social terms, the *OECD Learning Framework 2030* supports the need for broader educational goals (OECD, 2018). Both individual and collective well-being is the focus of this vision of the future, which assigns a critical role to education in moving toward these goals: education plays a crucial role in developing the knowledge, skills, attitudes and values that enable people to contribute to, and benefit from, an inclusive and sustainable future. Learning to set clear and purposeful goals, collaborate with others with different perspectives, find untapped opportunities and diverse solutions to more major problems will be essential in the years ahead. Education must aim to do more than just prepare young people for a future in the workforce; it must also equip students with the skills they need to become active, responsible and engaged citizens (OECD, 2018).

It is thus the demand for an inclusive education that places children at the centre of their learning, a personalised environment that supports and motivates each learner, makes connections between different learning experiences and allows children to shape their learning processes in collaboration with others. The competencies and skills that students should acquire for the development of their personality are transversal skills or life skills that become necessary in different disciplinary and non-disciplinary learning situations. In 1998, the World Health Organization (WHO) defined life skills as the adaptive and positive behaviour skills that enable individuals to cope effectively with the demands and challenges of daily life (WHO, 1999). These WHO life skills are therefore found in the areas of decision-making, problem-solving, creative and critical thinking, communication and interpersonal skills, self-awareness, empathy, managing emotions, and coping with stress (p. 1).

The United Nations agency UNICEF places children in the focus of their activities and defines life skills similarly, placing them in an A-S-K (attitudes, skills and knowledge) model of competencies: “an approach to behaviour change or behaviour development that aims to balance the three domains of knowledge, attitude and skills” (United Nations, 2006). Broken down specifically, the skills described by UNICEF and WHO are listed as the following ten core life skills strategies and techniques: problem solving, critical thinking, effective communication skills, decision making, creative thinking, in-

terpersonal relationship skills, self-esteem-building skills, empathy and coping with stress and emotions (United Nations, 2006).

The materials for teachers and students developed as part of the “PALS” project addresses these findings and are aimed at the future key players in children’s educational biographies who can make a significant contribution to this: prospective teachers of 4–8-year-old children and the current teachers of these students (Kuhn & Weidinger, 2021). The PALS project uses the described ten life skills in their respective domains as a competence-oriented framework for development and research.

Table 1 – Life Skills and their domains in PALS, adapted from WHO (1999)

Cognitive competencies	Social competencies	Emotional competencies
Problem solving	Effective communication	Self-awareness
Creative thinking	Interpersonal	Coping with emotions
Critical thinking	relationship skills	Coping with stress
Decision making	Empathy	

It becomes evident that all life skills overlap and can best be supported using a holistic approach (Weidinger 2023, p. 16). Life skills education can already start the moment a child enters the school system at kindergarten level and should ideally last for that child’s entire lifetime. Due to curricular subject-specific regulations and general overload, life skills are taught in a cross-curricular way through a spiral curriculum in most school systems, introducing key concepts at an early stage and repeating them with greater levels of complexity gradually each school year (Weidinger 2023, p. 16). Unlike specific subjects, play settings in kindergarten and school have a much higher degree of freedom and autonomy to be used by kindergarten or schoolteachers for deliberately integrating and training life skills. In PALS, various possibilities and play-oriented teaching and learning sequences are developed and implemented following the most prevalent aim of shifting the attitudes of teachers towards an openness for innovative and playful teaching and learning without losing focus.

1.3 Life Skills Development in the Continuum of Play

As widely known from developmental psychology, children display different types of play during their development, and understanding the various phases where new types of play occur is crucial for kindergarten and school-teachers. Heimlich (2015, p. 34) defines the different types of play as follows:

- functional play/exploration play (first type of play, age 0/1 and onwards);
- symbolic/imaginative play (ages 2 and onwards);
- role play/social play/sociodramatic play (ages 4 and onwards);
- constructive play (ages 4 ½ and onwards) and
- games with rules (ages 5 and onwards).

All types of play are important for individual development between the ages 4 and 8. Considering the high heterogeneity in child development within a classroom, the learning environment must provide a good balance of different types and forms of play (Geiger et al., 2023, p. 135).

One way of supporting children within their play and planning play sequences in class is to work with the continuum of play-based learning (Geiger et al., 2023; Pyle & Danniels, 2016; UNICEF, 2023), which differentiates forms of play according to the levels of steering and control in them:

- child-directed forms of play: open play, free play, or inquiry play;
- collaborative forms of play: collaboratively designed play or guided play and
- teacher-directed forms of play: instructional play, extended play and learning through games.

The PALS project aims to support child-directed, as well as collaborative, forms of play. The authors of the PALS teaching and learning materials offer a more detailed description of these forms (Geiger et al., 2023, p. 139).

In free play, children have the freedom to decide what they play, with whom they want to play and where they play (UNICEF, 2023), whereas in open play the environment is prepared through the teacher which can be helpful to give structure and inspiration through room design and material or specified play areas. A combination of free and open play can be reached if children

are given the chance to create and design new ideas as a complement to the prepared learning environment set by the teacher. [...] Guided play combines the benefits of self-directed play with the positive effects of restrained but purposeful instruction to promote cognitive, academic, and socio-emotional skills through play. Adults can support children by providing a “scaffold”, but still letting the children implement their own ideas (Toub, Rajan, Golinkoff & Hirsh-Pasek, 2016)

Playful learning, as emphasized by Kathy Hirsh-Pasek and her colleagues, is a vital educational approach that integrates the joy of play with intentional learning objectives, fostering holistic development in children (Toub et al., 2016; Hirsh-Pasek & Hadani, 2020). The authors advocate for guided play—a method where educators subtly steer children’s play towards specific learning goals without diminishing the child’s sense of agency. This approach has been shown to enhance vocabulary acquisition and spatial reasoning more effectively than either free play or direct instruction alone. By engaging children in active, meaningful, and socially interactive experiences, playful learning cultivates essential 21st-century skills such as collaboration, communication, and critical thinking (Hirsh-Pasek & Hadani, 2020). Developing life skills can take place in all forms along the continuum of play. However, the PALS project tries to shift the attitudes of teachers and educators towards consciously integrating more child-directed and collaborative forms of play into their daily teaching. The following section provides a more detailed insight into the PALS project.

2. The PALS Project in Detail

The PALS – Play and Life Skills – project was co-organised by three institutions and ran from 2022 until 2025 with the financial support of the Community Fund of the Canton of Zurich. PALS was initiated by the Zurich University of Teacher Education and its Centre of Teaching and Transcultural Learning of the Department International Projects in Education following the demands of two other institutions, the Serbian Pre-school Teacher Training College in Novi Sad and the North-Macedonian Institute of Pedagogy of the

Faculty of Philosophy in Skopje. In short, PALS combines the two domains of play and life skills with the aim of developing competencies in both areas on different levels for different target groups. The most significant goals of PALS are threefold (Kuhn & Weidinger, 2023):

- to increase the awareness of the importance of free play for acquiring life skills among lecturers, students and teachers;
- to enhance the competencies of university faculties through the joint development of materials and training on play and learning and
- to strengthen the link between teacher training and school practice in play and learning for 4- to 8-year-old children.

The alignment of these goals stems from the demands formulated by all project partners in the light of the changed competencies of children entering kindergarten and primary school. Not only social changes in families, but also changes in children's play spaces, increasing fear in society in general, the influence of digital tools and a change in the perceived importance of play from caregivers lead to tensions and often also perceived deficits in the competencies of children when they enter the school system (Damovska, et al., 2023). All partners also pointed out that awareness-raising of the importance of play not only concerns parents, but must also be increased among teachers, student teachers and lecturers at pre- and in-service teacher training universities.

PALS works with an impact chain that focuses on the following target groups: lecturers, student teachers, kindergarten and schoolteachers and students (children), and foresees changes in competencies and attitudes in each target group:

1. Lecturers: joint development and implementation of manuals, videos, modules, train-the-trainer and research study–commitment, change of attitudes, capacity-building of young researchers.
2. Kindergarten and schoolteachers: trying out new approaches, taking part in training – change of attitudes, acquisition of competencies and commitment to innovative concepts.
3. Student teachers: experiencing innovative forms of teaching and learning methods, trying out development-oriented play situations and using new

materials – the acquisition of competencies, change of attitudes, courage and belief in own competencies and professional identity.

4. Students – children: experiencing play and learning opportunities in kindergarten/school and daycare (if integrated into school) – acquisition of competencies.

2.1 The Elements of PALS

The target groups within the impact chain of PALS are addressed with different elements within the project. PALS consists of:

- teaching materials for Higher Education (to be used by lecturers, kindergarten and schoolteachers, and student teachers);
- a series of videos of classroom situations (to be used in pre- and in-service training situations or for illustrative purposes at events for parents);
- training modules for Higher Education (to be used for pre-service training) and
- training sessions for in-service training for kindergarten and schoolteachers.

All materials have been jointly developed by the three participating institutions and their specialists with different areas of expertise (education, teaching and learning, developmental psychology, play, life skills, and inclusion). In a co-creative process, teams from the three institutions used an iterative process of observing, gathering information, building hypotheses, planning, deciding, intervening, adapting and continuously switching between reflection and action throughout the entire development and implementation period of PALS. Both the materials and the training elements were piloted in Skopje and Novi Sad. Teaching materials and the series of videos are available for free download from ipe-textbooks.phzh.ch and Filme für Eltern (spielen-plus.ch).

2.2 Research Study

The main concerns of the PALS project lie in the importance of free play in contrast to widespread educational games (which exclusively concentrate on the cognitive areas of thought-addressing activities), and which should lead

to a change in certain skills and abilities for learning. Free play as an expression of a child's desire to discover and explore the world is at the centre of these considerations.

The outcome study accompanying the PALS project fulfils two functions: on the one hand, it aims to gain insights into the attitudes of student teachers and teachers regarding the importance of opportunities for learning through play. On the other hand, the cross-country comparison not only delivers interesting results for enhancing the project's activities and future implementation, but also aims to help researchers contribute to capacity-building through this international exchange.

In the field of action research, the accompanying PALS study follows the paradigm of participatory action research (SAS 2 Dialogue, 2021). In the context of international educational collaborations, participatory action research provides a way to engage the various stakeholders together in the process of collaboration and reflection toward a desired change (Reason & Bradbury, 2008). In the study laid out by PALS, the participatory action research approach involves "communities of inquiry and action" that collectively gather and experiment with data and information and mirror their findings to their own experience. In doing this, the PALS companion study draws on the three aspects of the participants' own work: participation (living in society and democracy), action (involvement with experience and their own histories) and research (thoughtful grounding and knowledge building) (Chevalier & Buckles, 2013). In this interpretation of participatory action research, action combines the two fields of research as well as the collective processes of "self-exploration" (Rahman, 2008). In terms of the PALS project's concerns, this methodological approach also represents a pluralistic orientation to knowledge creation and social change (Chambers, 2008).

The study is supervised locally by a subject-matter expert from each of the partner organisations. It focuses on the following questions:

- How do teachers and teacher students estimate their competencies, knowledge and attitudes in connecting play with the development of life skills?
- Does the compiled PALS material and programme lead to a change in competencies, attitudes and knowledge?

It will be investigated if the project contributes to exploiting free play for the development of children's transversal competencies and provides evidence for integrating play into a component of elementary education in the future. The aim is to prove that age-appropriate pedagogy and didactics can not only promote knowledge and competence but also have an impact on attitudes towards play in the educational levels of kindergarten and primary school. The design followed a mixed-method approach, combining quantitative and qualitative elements, which aims to gain insights into the attitudinal and behavioural changes among lecturers and students participating in the PALS project using an action research approach (with phenomenological elements). The quantitative results were gained through questionnaires based on different dimensions of life skills and play development and completed by lecturers (who also act as multipliers), student teachers and teachers participating in the project training and who were part of the expert groups in a pre- and post-test design.

The qualitative elements of the design followed the ethnographic method of observation of training sessions, enriching these with focus group discussions with student teachers through semi-structured interview guidelines.

2.3 Results and Discussion

The results from the research study presented in this article consist of the pre- and post-test results from the pilot group student teachers (North Macedonia and Serbia) and preschool teachers (Serbia). The pre-test (T1) for student teachers in Serbia and North-Macedonia took place in November 2023, the post-test (T2) in June 2024. Pre- and post-tests for Serbian pre-school teachers took place in February 2024 and April 2025. Testing points were aligned shortly before the start of the training and after one year of training and implementation.

Pre-school teachers (n = 30)

The PALS survey was conducted among preschool teachers in Serbia at two time points, T1 and T2. In the initial phase, thirty participants were included, and the sample size expanded by 13% in T2, reaching a total of 34 respondents. The age distribution shifted slightly, with the younger cohort (21-

30 years) increasing from one-tenth to nearly one-fifth of the sample. Meanwhile, the proportion of male participants almost doubled, moving from just over 3% to almost 6%.

Between T1 and T2, the implementation of various play types increased. Open play was reported by over nine in ten teachers, up from nearly 87% in T1, reflecting a modest rise. Extended play saw a more noticeable increase, from 90% to 97%, while guided play rose from 70% to 79%. These trends indicate a broader adoption of structured play activities among teachers in T2.

The most practiced forms of play remained symbolic and constructive play at both points in time. Symbolic play decreased slightly, falling from 76% to 71%, while constructive play saw a similar decline of just over 6%. Conversely, didactic play experienced a small increase, moving from just over 53% to 56%. The use of digital games also rose slightly, from 13% to nearly 18%.

The preference for symbolic play remained steady, increasing slightly to just under 18% in T2. Role play also rose modestly from 27% to 29%, while didactic play remained largely unchanged. However, the preference for digital games declined from 60% to 50%, suggesting a shift back to more traditional forms of play.

Time dedicated to play activities increased significantly in T2, with over 44% of respondents allocating more than three hours daily, compared to one-third in T1. Meanwhile, the proportion of teachers allocating less than 30 minutes to play dropped to 0, indicating a growing recognition of the importance of extended play in early childhood education.

In T2, there was greater emphasis on critical thinking, interpersonal relationships, and self-awareness. The focus on critical thinking rose from 50% to 59%, while interpersonal skills saw a significant rise from just over 52% to 77% percent. However, the emphasis on empathy decreased slightly, from nearly 97% to 85%. Coping with emotions also saw a decline from 83% to 77%.

Teachers identified several challenges in implementing play activities. The proportion of those citing insufficient materials decreased from almost 47% to 35%. Conflicts among children also dropped, moving from 20% to just under 12%. However, challenges related to diverse family backgrounds remained consistent at approximately 47% in both phases.

Respondents expressed a need for more training in specific areas. Play

projects emerged as a key area of interest, increasing slightly, while the focus on digital competences decreased significantly, from nearly 37% to just over 20%. This shift suggests a reduced emphasis on digital tools in favor of more traditional play methods.

Active participation in play remained relatively stable in T2, with just over 73% of teachers actively engaging in play activities. Observing play decreased slightly, moving from 73% to 68%, while enriching play with materials also dropped slightly, from 93% to 91%.

Problem-solving continued to be the most effectively supported life skill through play, though it decreased slightly from 83% to 79%. Coping with stress, however, saw a more pronounced decline, falling from 43% to 32% percent. Empathy also decreased, moving from almost 97% percent in T1 to 85% in T2.

In conclusion, the findings suggest a positive shift toward more structured and varied play activities, with increased emphasis on critical thinking and interpersonal skills. However, the decrease in focus on emotional regulation and coping with stress indicates areas for further training and support, particularly in fostering emotional competence through play.

Student teachers (NMK: n=104, SRB: n= 27)

At T1, most second-year students in Serbia (86%) and North Macedonia (78%) had not received play-based life skills training at university, though many engaged in play activities during their practica. In T2, open play increased from 56% to 61% in Serbia and from 34% to 45% in North Macedonia. Extended play rose significantly in Serbia (40.7% to 73.1%), while guided play increased from 4% to 46%. In North Macedonia, extended play remained stable (60% to 58%), and guided play rose from 41% to 52%. Constructive play was practiced by 81% (SRB) and 53% (NMK), symbolic play by 77% (SRB) and 55% (NMK), and role play by 69% (SRB) and 54% (NMK). Interest in didactic play increased significantly, from 4% to 61% in Serbia and from 49% to 59% in North Macedonia.

By T2, 81% (SRB) and 57% (NMK) of students enriched play by providing materials, up from 35% (SRB) and 48% (NMK) in T1. Observing children's play rose from 8% to 27% in Serbia but decreased in North Macedonia from 48% to 43%. Participation in play increased in Serbia (46% to 73%) but re-

mained stable in North Macedonia. Serbian students increasingly focused on children's relationships during play (61% to 96%) and cooperation skills (23% to 69%).

Critical thinking was the least experienced life skill for Serbian teacher students in their training at T1, but 42% engaged in it by T2. Empathy and decision-making also saw significant increases in Serbia. In North Macedonia, problem-solving and coping with stress remained key skills but showed little change. Daily time allocation for life skills was minimal in both countries, with most students dedicating one to two hours per day.

Key challenges identified in T2 included being the only teacher (65%) and diverse family backgrounds (54%) in Serbia, and lack of classroom space (52%) and time (46%) in North Macedonia. Interest in training for play and inclusive education increased, especially in Serbia, where digital competence also saw a rise (8% to 35%).

Despite some progress, significant needs remain for training in coping with stress, coping with emotions, and decision-making, especially in North Macedonia, where 72% expressed a need for stress management training. The T2 findings suggest a growing focus on structured play and life skills, but targeted training is still necessary to address persistent challenges. From the researchers' point of view special attention should be given to the needs addressed concerning aspects of play-based learning such as developing innovative spaces, spending time outside, focusing on heterogeneous groups of children and inclusive education. Concerning curricula at teacher training institutions, study programmes should incorporate the teacher students' needs for focusing on how to deal with stress and continue working on critical thinking skills. Strengthening the process of combining play and life skills in pre- and in-service teacher training should remain a central aim in the future.

2.4 Next Steps

After a series of training sessions and time for implementation, trialing and the post-test, schoolteachers in both countries will be invited to next phase. In both institutions, student teachers received information and training for play and life skills development with PALS materials. The results of both quanti-

tative and qualitative research activities will lead to a better understanding of the impact of the PALS materials and training elements. After this first round of trials and implementation, the PALS modules will be adapted and accompanied by recommendations and feedback from the lecturers solidly anchored in both pre- and in-service training programmes at both universities. Additionally, both institutions will disseminate the results and the adapted programme with other educational institutions, experts and teachers in the schools. Insights into how and what forms of play activities contribute most to not only the children's competencies but also to the change of skills and competencies of schoolteachers, future schoolteachers and lecturers, will be shared during the final year of the PALS project and in a final conference in September 2025.

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